

Work Order ID 54704

December 16, 2009 3:26:38 PM



Page 1

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 16/12/2009 Start Qty: 1.00

Cust Item ID:

Required Date: 21/12/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio FA599

Rev: AD & Dwg D3391 Rev: H

a.m 09-12-23P

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

a.m 09-12-23P

111

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control


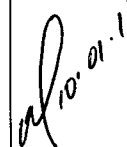

⇒ 8.10.10/04

40

40

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3391-025 PAR #: _____ Fault Category: Skid tubes NCR: Yes No DQA: ✓ Date: 10-03-02
 Resolution: re-work Disposition: re-work QA: N/C Closed: ✓ Date: 10/03/02

NCR: 54704		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.01.11	100	STEADY TEST MARKINGS ON WORKPIECE. R.C. process.	 10.01.20 311 451 042	BUFF OUT MARKS	 10.01.11	S 10/01/27	 10.01.20 per 451 042	S 10/01/27

NOTE: Date & initial all entries

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Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Setup Start

Stop

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

1-Machine as per Folio FA 599 Rev: AA & Dwg D3391 Rev: H
2-Deburr

0.00

0.00

rel 10.01.11

130



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

rel 10.01.11

140



QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

0.00

rel 10/01/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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December 16, 2009 3:26:38 PM



Page 3

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

1 11/10/1/26

160

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

11 11/11/27

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

h=4.20" 0.00

228 10/10/27



Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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December 16, 2009 3:26:38 PM

Page 4

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Required Date: 21/12/2009 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

0.00



Skidtubes

Skidtubes

0.00

Memo

1-Open Aft cap pilot hole to .208" as per Dwg D3391

BE 10/01/27

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

BE 10/01/27

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217
Wearplate Jig.

*****Do Not Open To Finished Size*****

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2
previously drilled aft wearplate holes.

H 10/11/27

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe, wearplate to 0.297" and float bag holes to 0.328" as per
Dwg D3391.

BE 10/01/27

7-Deburr

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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December 16, 2009 3:26:38 PM



Page 5

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



⇒ S 106128



QC

Memo

0.00

Quality Control

200

Chemical Conversion Coat per QS1005 4.1

0.00



M 10/2/1

HandFinish

Memo

0.00

Hand Finishing

210

QC3- Inspect Part Finish

0.00



BE 12/02/09

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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December 16, 2009 3:26:38 PM



Page 6

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

0.00



Skidtubes

Skidtubes

Memo

0.00

Instal spacers as per dwg D3391
A/R Magnabond 6398 Batch: M112417
exp. date: 12/1/30
cure time 12hrs as per QSI0015

M10/2/2

230

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

⇒ 8102105



Quality Control

240

0.00



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

Powdercoat

Memo

0.00

START TIME: 10:05
OVEN TEMPERATURE: 220°
FINISH TIME: 10:35

16R 10-02-19



Powder Coating

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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December 16, 2009 3:26:38 PM



Page 7

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Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

250

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

7 m, h 10/02/23

Quality Control

260

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install inserts as per Dwg D3391
2-Install Aft Cap as per Dwg D3391
A/ R Sikaflex-241/-291
Sikaflex expiry date: 10/08

M112345

> m, h 10/02/23

270

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8 10/02/23

(40)

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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NOTE: Date & initial all entries

Work Order ID 54704

December 16, 2009 3:26:38 PM



Page 8

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Item Name: Aft Tube Assembly

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Cust Item ID:

Required Date: 21/12/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

280

Identify as per dwg & Stock Location: _____

0.00



Packaging

used on w/o 54706

Memo

0.00

FMH 10/02/23 (1X)

Packaging

290

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/02/23

LMF

10-2-22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 16, 2009 3:26:42 PM

Work Order ID: 54704



Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 16/12/2009

Required Date: 21/12/2009

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D6014-090

Manufactured

No

100

Each

15.0000

1.0000



ALUMINUM EXTRUSION

am 09-12-230

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

LG

15

42768

15

230

Each

115.0000

4.0000

D3670-4-200

Manufactured

No



SPACER

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

115

48198

30

48269

85

9 11/2/2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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December 16, 2009 3:26:42 PM

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Start Date: 16/12/2009

Required Date: 21/12/2009

Start Qty: 1.00

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Comments:

Component Item ID Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
--------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

D2646

Manufactured

No

270

Each

68.0000

1.0000



Aft Cap

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP6

29

52663

29

Main Warehouse

fp7

13

52663

13

Main Warehouse

ST

26

46327

4

48109

22

D3537-1

Manufactured

No

270

Each

156.0000

1.0000



Wearpad

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

2

48288

2

Main Warehouse

FP17

154

51678

49

51679

105

m-h
10/02/23

m-h
10/02/23

December 16, 2009 3:26:42 PM

Shop Packet Print

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item Name: Aft Tube Assembly


Start Date: 16/12/2009

Required Date: 21/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3537-7  Wearpad		Manufactured	No			270	Each	18.0000	1.0000			

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

45408

46346

18

6

12

D3553-1

Manufactured No

270

Each

13.0000

1.0000



Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

33868

13

13

10/02/23

IX m-h

IX m-h 10/02/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Start Qty: 1.00

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D3553-3		Manufactured	No			270	Each	62.0000	1.0000			
												
Gasket												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP

53480 ✓

60

60

Main Warehouse

ST

47206

2

2

270

Each

1,786.000 2.0000

D3672-1

Manufactured

No



Phenolic Washer

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

1286

39275

19

42329

5

47628 ✓

262

52505

1000

Main Warehouse

ST117

500

51674

500

1x m-k 10/02/23

2x m-k 10/02/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 21/12/2009

Comments:

Start Qty: 1.00

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Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty #n Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	--------------------------	---------------	----------------	--------

ALS4-1032-130 Purchased

No

260

Each

2,717.000

14.0000



Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

2717

110511 ✓

2717

ALS4-1032-225

Purchased

No

270

Each

6,713.000

12.0000



Insert

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

6713

107441

16

110768 ✓

6697

14X m-k
10/02/23

12 m-k
10/02/23

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Required Date: 21/12/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin/ Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3C4A  BOLT		Purchased	No			270	Each	1,461.000	6.0000			

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse	M113644	
ST	1461	
112314	13	
112720	12	
112724	3	
112829	1	
112991	2	
113121	74	
113226	842	
113359	14	
113422	500	

6X M-L 10/02/23

AN3C5A  Bolt	Purchased	No			270	Each	669.0000	4.0000				
---	-----------	----	--	--	-----	------	----------	--------	--	--	--	--

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
ST	669	
111424	8	
111707	69	
112314	1	
113121	291	
113149	300	

10/02/23

4X M-L

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

December 16, 2009 3:26:42 PM

Work Order ID: 54704



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 16/12/2009

Required Date: 21/12/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960C10L		Purchased	No			270	Each	416.0000	10.0000			

washer

NAS1149C032R

Warehouse

Loc Qty

Loc Code

Location

M113288

10X 10/02/23

OFFSHORE

FG

100

103585

100

Main Warehouse

ST

316

112116

156

112612

160

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 54704
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: H	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

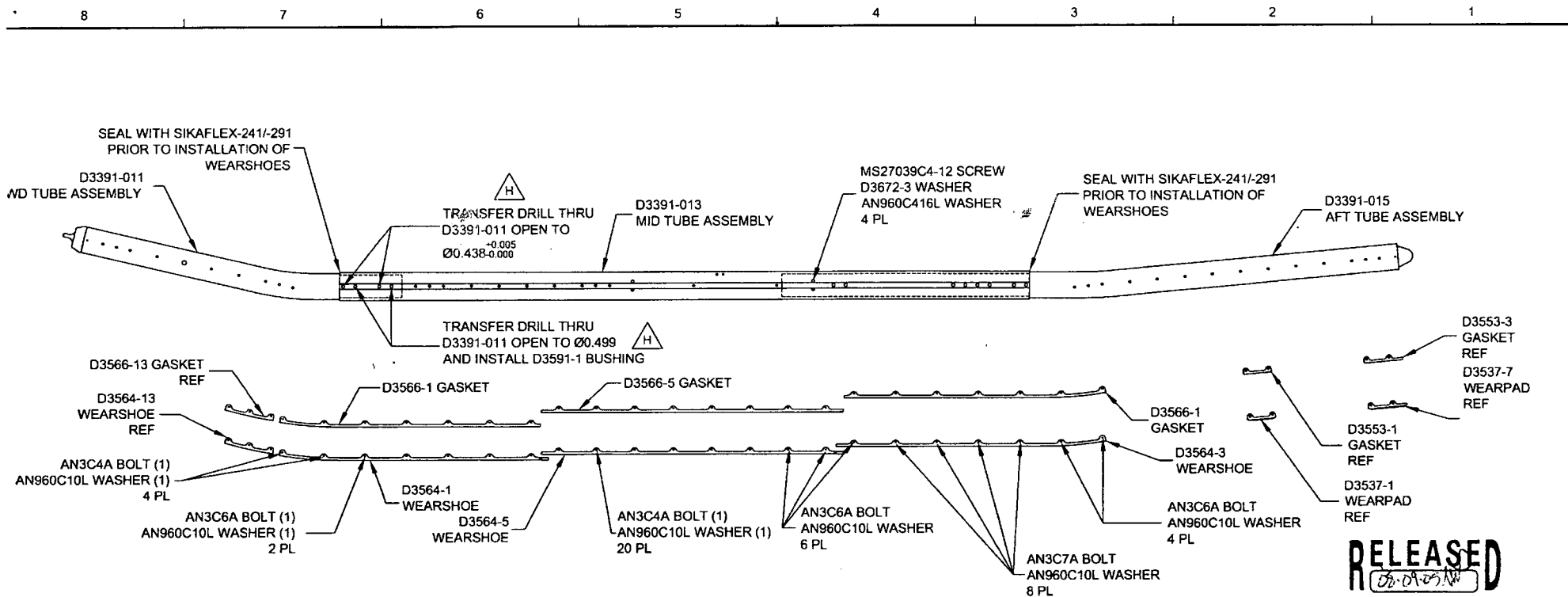
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.000	/			
3.500	+/-0.010	3.505	/			
88.93	+/-0.030	88.940	/			
44.995	+/-0.030	45.000	/			
Ø3.200	+/-0.010	3.198	/			
88.93	+/-0.030	88.940	/			
Ø3.750	+/-0.010	3.750	/			
30° x 160° chamfer	+/-0.010	30° x 160°	/			

Measured by: A.M.	Date: 09-12-23
Audited by: S	Date: 10/01/20

HAAS Section						
1.526	+0.000/-0.030	1.517				
7.500	+/-0.010	7.500				
27.750	+/-0.010	27.750				
31.750	+/-0.010	31.750				
35.250	+/-0.010	35.250				
3.300	+/-0.010	3.300				
0.200	+/-0.010	.200				
3.520	+/-0.010	3.520				
0.687	+0.010/-0.000	.687				
R0.062	+/-0.010	.062				
Ø0.484	+0.005/-0.001	.484				

Measured by: [Signature]	Date: 10-01-11
Audited by: SP	Date: 10/01/20

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	



D3391-041 ASSEMBLY

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 34704
09-12-76

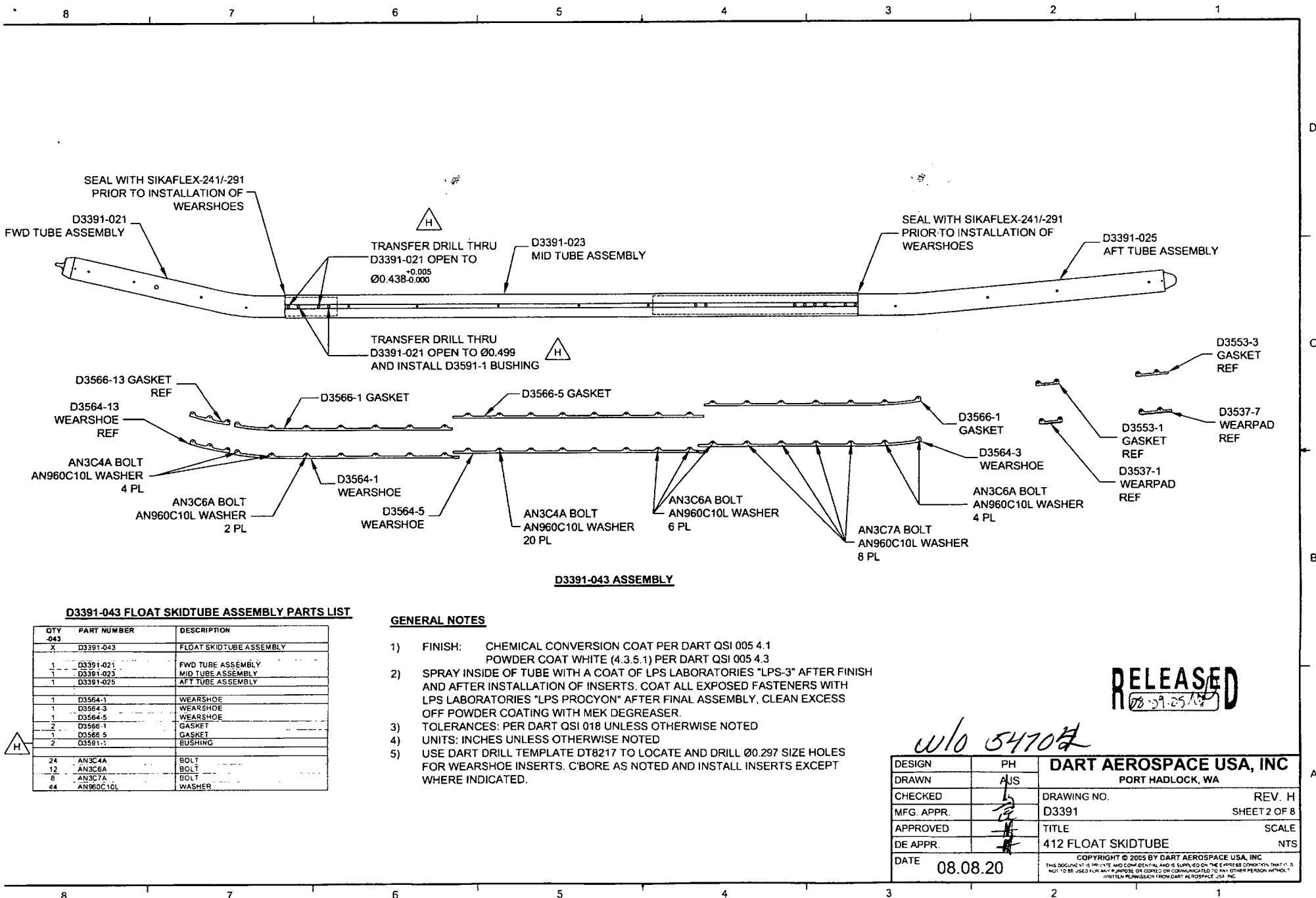
D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

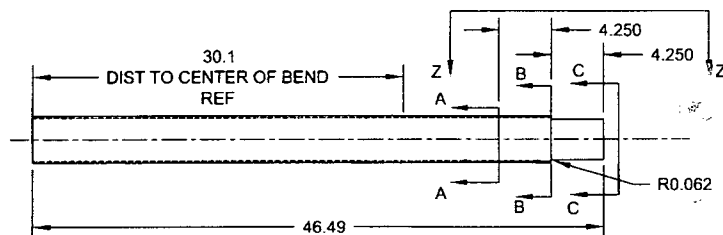
QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

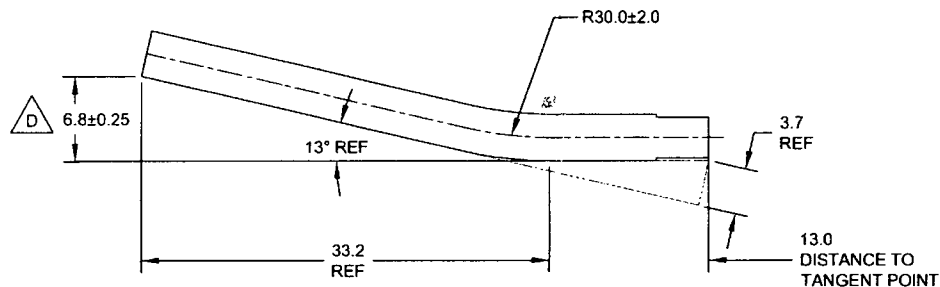
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
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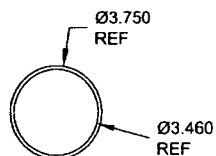




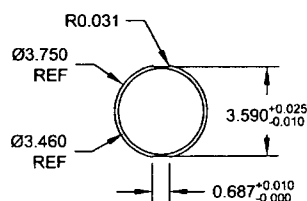
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



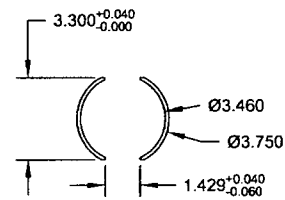
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



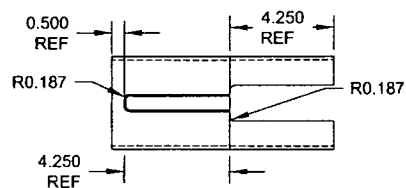
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X






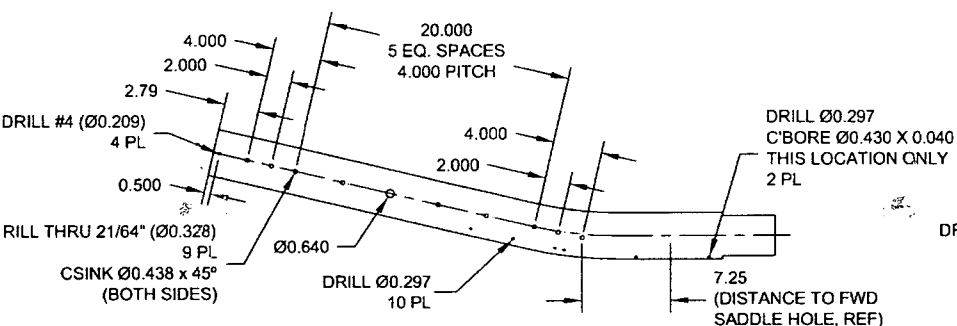
SECTION C-C
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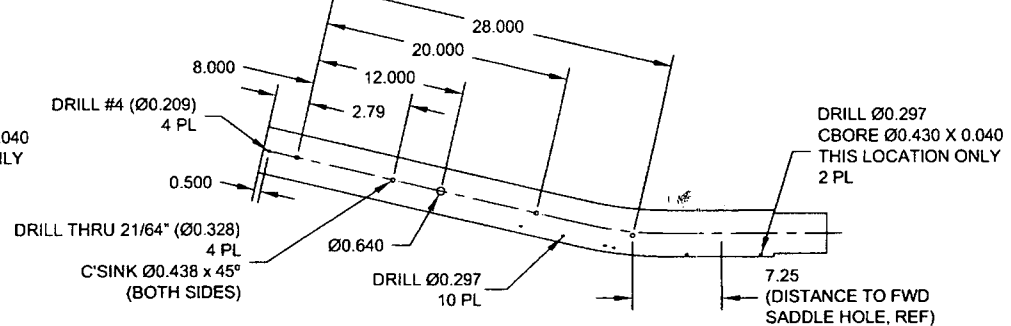
VIEW Z-Z
SCALE 2X

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01-05-11

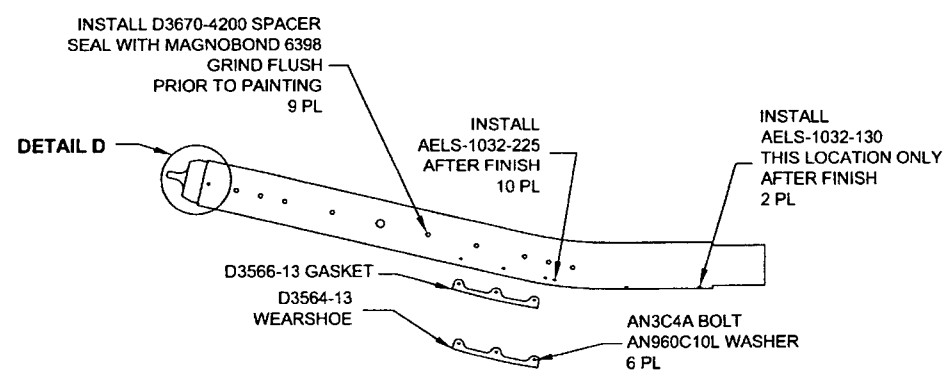
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MFG. APPR.		D3391	SHEET 3 OF 8
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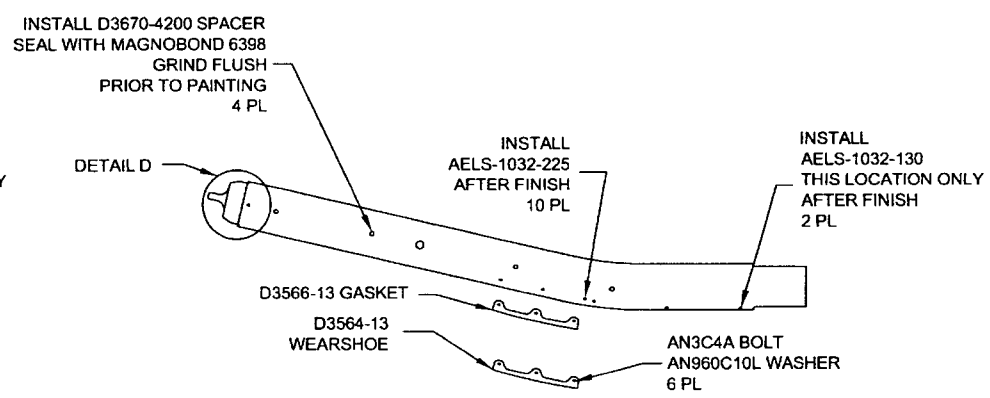
D3391-011 DRILLING DETAIL



D3391-021 DRILLING DETAIL



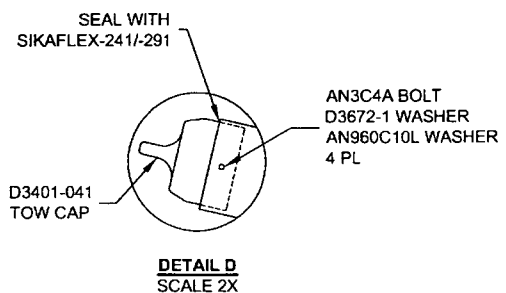
D3391-011 ASSEMBLY DETAIL



D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

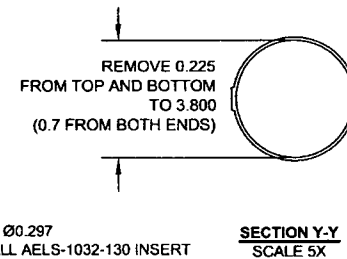
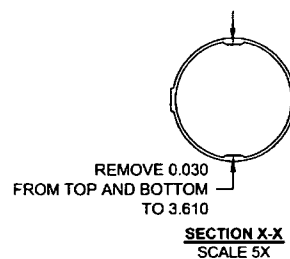
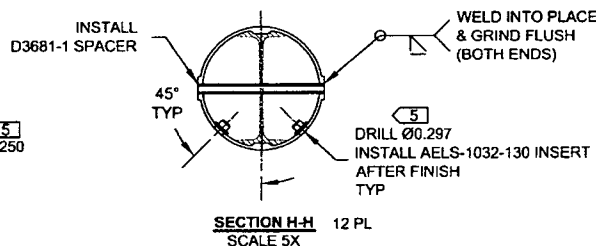
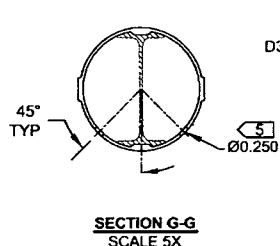
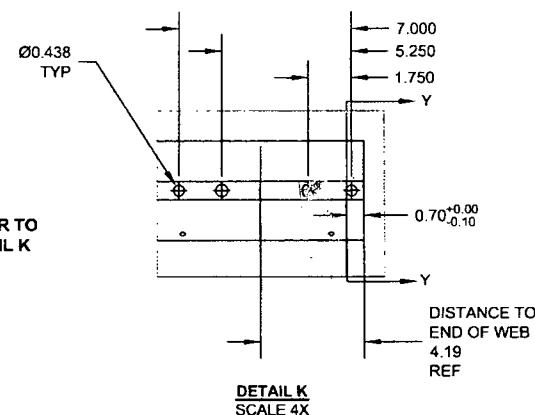
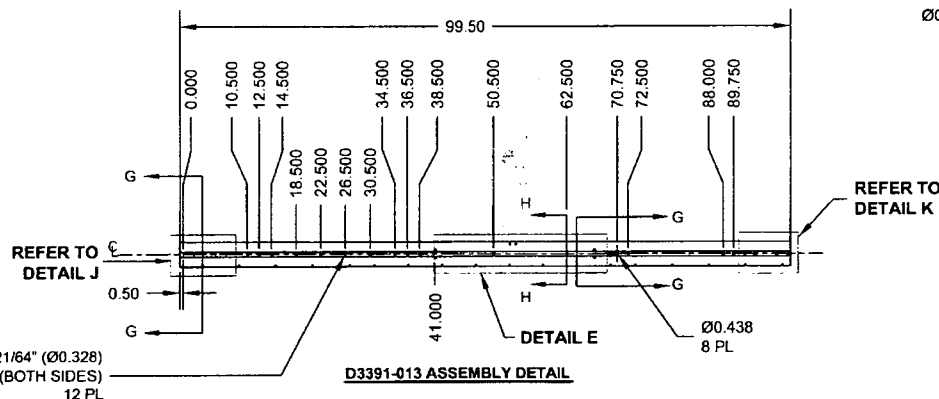
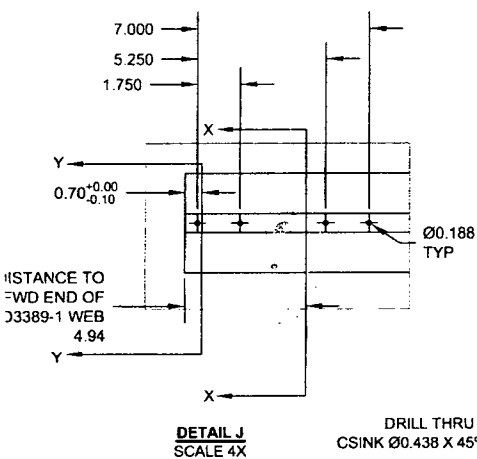
QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
2	2	AELS-1032-130	INSERT
10	10	AELS-1032-225	INSERT



w/6 54704

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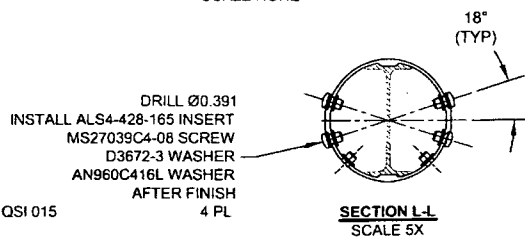
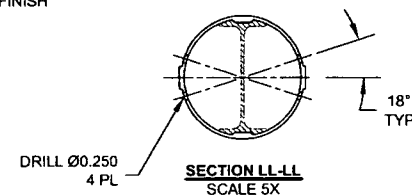
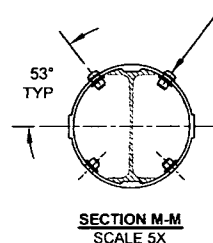
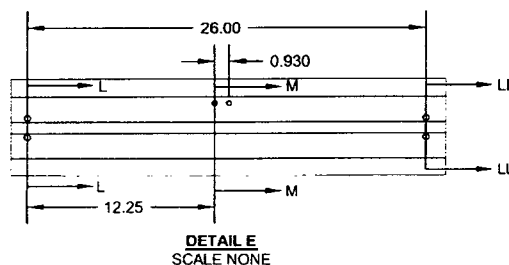


D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

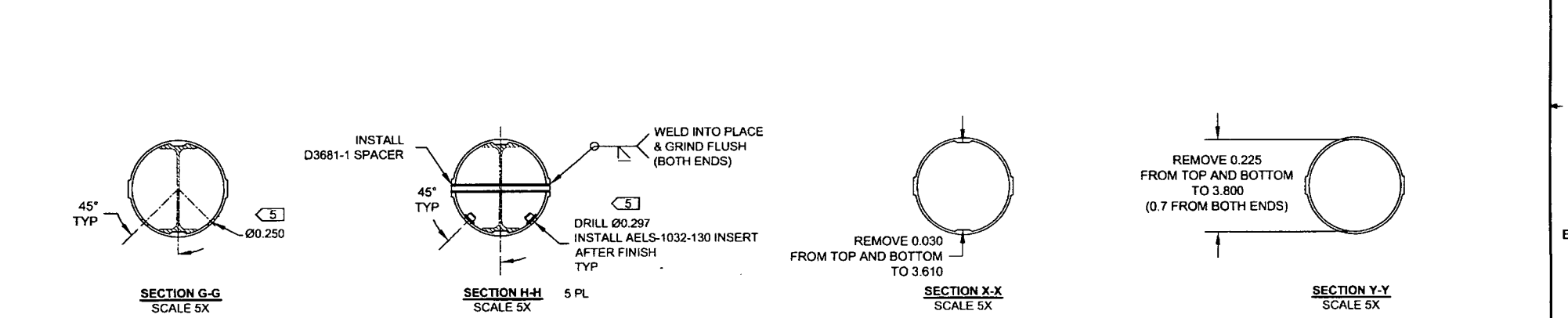
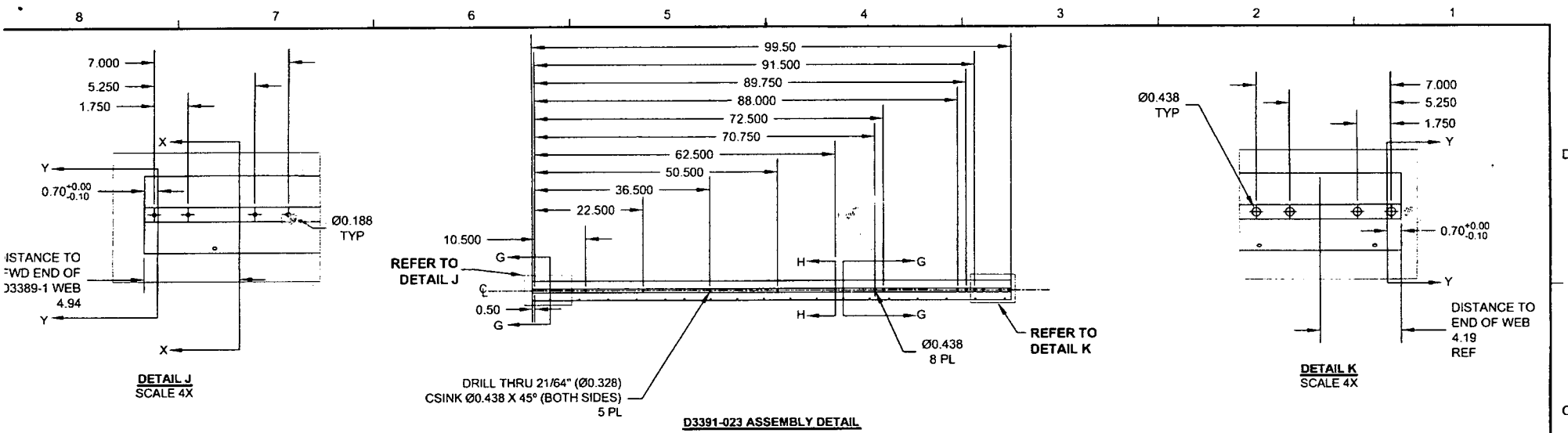
D3391-013 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004



W10 54704

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D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

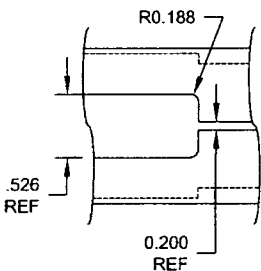
- D3391-023 MID TUBE ASSEMBLY**
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
 - 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
 - 3) WELDING: PER DART QSI 004

RELEASED

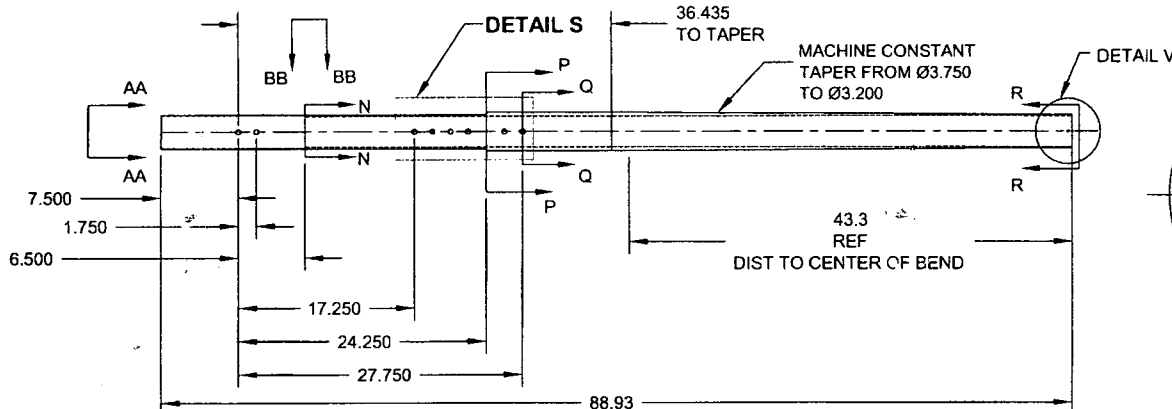
W/D 54704

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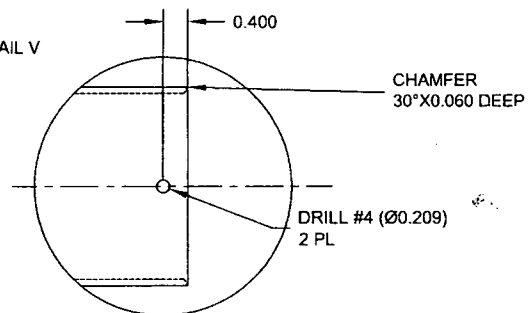
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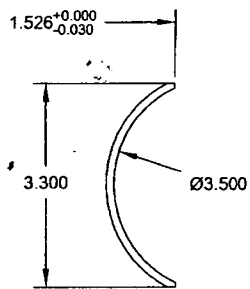
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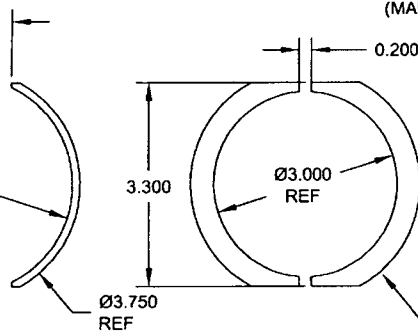
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



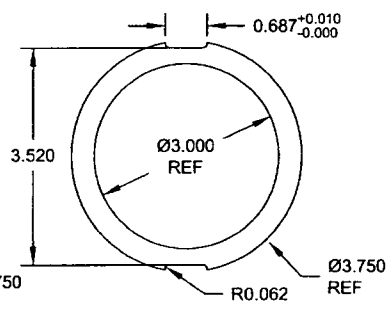
DETAIL V
SCALE 6X



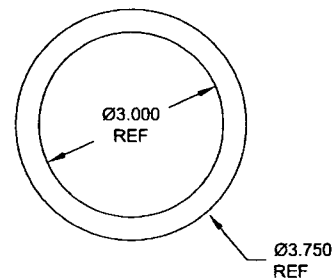
SECTION AA-AA
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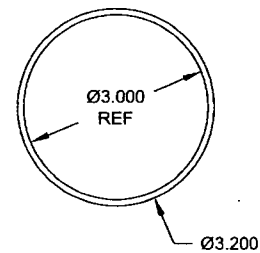
SECTION N-N
SCALE 6X



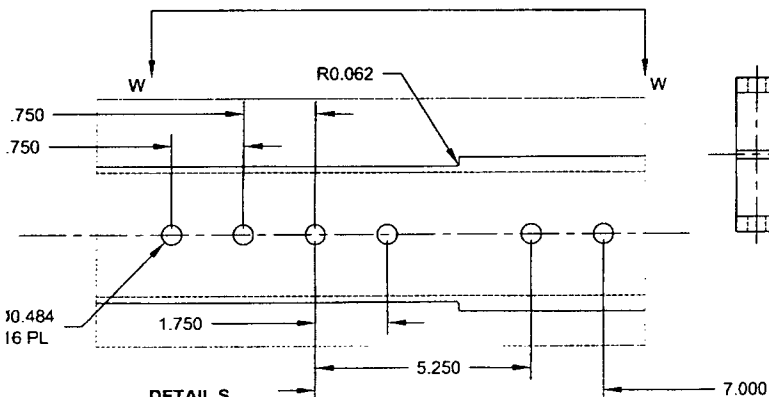
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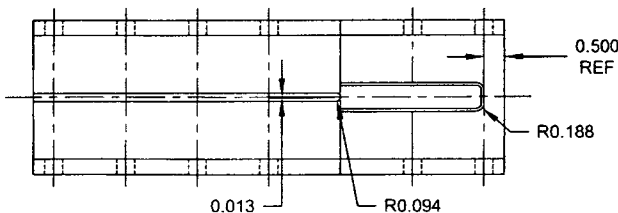
SECTION Q-Q
SCALE 6X



SECTION R-R
SCALE 6X



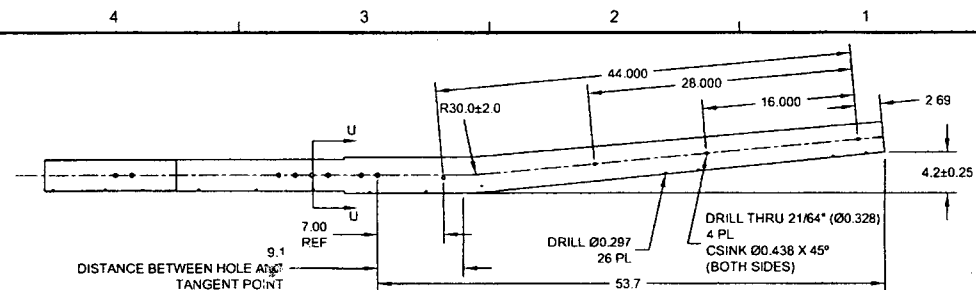
DETAIL S
SCALE 4X



VIEW W-W
SCALE 4X

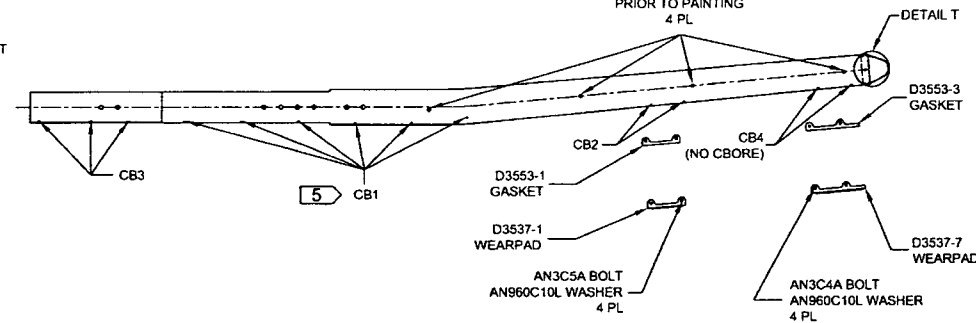
RELEASED
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DESIGN	PH	DART AEROSPACE USA, INC	
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CHECKED	J	DRAWING NO.	REV. H
MFG. APPR.	J	D3391	SHEET 7 OF 8
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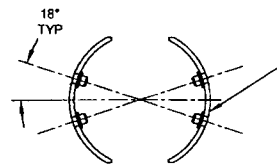
D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

INSTALL D3670-4200 SPACER
SEAL WITH MAGNOBOND 6398
GRIND FLUSH
PRIOR TO PAINTING
4 PL

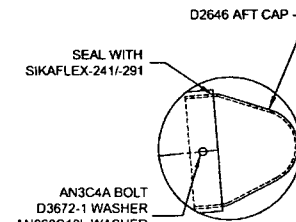


D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4		ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER





SECTION CC-CC
SCALE 3X



DETAIL T
SCALE 4X

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 8 OF
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NT
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08-09-05